REMARKS

The foregoing claim amendment amends claim 1, 3, 6 and 7, cancels claim 2, and adds claims 15-16. Pending in the application are claims 1, 3 and 5-8 and 10-16, of which claims 1, 3, 7 and 15 are independent. The following comments address all stated grounds for rejection and place the presently pending claims, as identified above, in condition for allowance.

Patentable Subject Matter

Claims 10-14 are indicated to recite patentable subject matter and would be allowable if rewritten in independent form.

Interview and Claim Amendments

Applicants thank the Examiner for the courtesy of the interview in order to discuss the issues raised in the Office Action of October 7, 2005. Applicants explained in detail the present invention in an effort to further prosecution. Applicants amend claims 1, 3 and 7 based on the discussion with the Examiner during the interview. In particular, claims 1, 3 and 7 are amended to recite first controlling the compressor to change an amount of the cathode gas supplied to the fuel cell at the start of the transition period of the fuel cell, and thereafter changing an opening of the pressure control valve depending on the changed amount of the cathode gas. Support for the claim amendment can be found in the figures and corresponding descriptions in the specification. No new matter is added. Applicants set forth following remarks in conformity with the discussion with the Examiner during the interview.

Rejection of Claim 6 under 35 U.S.C. §112, Second Paragraph

Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite because claim 6 depends from canceled claim 4. In response, Applicants amend claim 6 to depend from independent claim 3. In light of the foregoing claim amendments, Applicants request the Examiner reconsider and withdraw the rejection of claim 6 under 35 U.S.C. §112, second paragraph, and pass the claim to allowance.

Rejections of Claims 1-3, 5, 7 and 8 under 35 U.S.C. §102

Claims 1-3, 5, 7 and 8 are rejected under 35 U.S.C. §102(b) as being anticipated by United States Patent No. 5,366,821 ("Merritt"). Applicants respectfully traverse this rejection for the following reasons.

Independent claims 1 and 7 are directed to a process, and independent claim 3 to a system, for controlling the flow amount and the pressure of a cathode gas (air) supplied to a fuel cell in the transition period of the fuel cell. The claimed invention utilizes a compressor and a pressure control valve to control the flow amount and the pressure of the cathode gas, respectively. In particular, the claimed invention recites that the compressor is first controlled to change the amount of the cathode gas supplied to the fuel cell at the start of the transition period, and thereafter an opening of the pressure control valve is changed depending on the changed amount of the cathode gas. Claim 2 is canceled. Claims 5 and 8 depend from claims 3 and 7, respectively.

Applicants respectfully submit that the cited prior art reference does not disclose *first* controlling the compressor to change an amount of the cathode gas supplied to the fuel cell at the start of the transition period of the fuel cell, and *thereafter* changing an opening of the pressure control valve, depending on the changed amount of the cathode gas, to thereby regulate the pressure of the cathode gas, as recited in claims 1, 3 and 7.

The Merritt reference discloses that the valve (180) and the compressor (330) control the flow rate and the pressure of the air supplied to the fuel cell, respectively. In particular, the Merritt reference specifically discloses that the valve (180) is first controlled to increase the flow rate of the air and then the compressor (330) is controlled to compensate for the pressure drop generated due to the increase of the air flow rate. See Merritt, column 12, lines 6-28.

In contrast, the claimed invention *first* controls the compressor to change the amount of the cathode gas supplied to the fuel cell at a start of a transition period of the fuel cell, and

thereafter changes the opening of the pressure control valve depending on the amount of the changed cathode gas. With this arrangement, the claimed invention can improve the response time to increase or decrease the power generation amount of the fuel cell because the response time of the pressure control valve is shorter than that of the compressor. To clarify this aspect of the claimed invention, Applicants amend claims 1, 3 and 7 to recite that the compressor varies a rotation number thereof to control the amount of the cathode gas, and the pressure control valve varies an opening thereof to control the pressure of the cathode gas.

The Merritt reference does not disclose that the compressor is *first* controlled to change the amount of the cathode gas supplied to the fuel cell at a start of a transition period of the fuel cell, and *thereafter* the opening of the pressure control valve is changed depending on the amount of the changed cathode gas, as recited in the claimed invention. In the Merritt reference, the valve (180) is first controlled and then the compressor (330) is controlled to compensate for the pressure drop. The Merritt reference therefore does not provide the advantages of the claimed invention.

In light of the foregoing arguments and claim amendments, Applicants submit that the Merritt reference fails to disclose each and every element of claims 1, 3 and 7. Applicants therefore request the Examiner reconsider and withdraw the rejection of claims 1-3, 5, 7 and 8 under 35 U.S.C. §102(b), and pass the claims to allowance.

New Claims

Applicants add new claims 15-16 to clarify the scope of claimed invention. New claim 15 is added to rewrite dependent claim 10 in independent form including all of the limitations of base claim 1. New claim 16 is added to depend from claim 7 and parallel claim 10. Since claim 10 recites patentable subject matter, Applicants submit that the new claims are in condition for allowance.

Conclusion

In view of the above amendment, applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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